Specification

The following is a marked-up version of the specification with the language that is underlined ("___") being added and the language that contains strikethrough ("——") being deleted:

Please amend paragraph 18 starting on page 5 as follows:

FIG. 4 is a schematic diagram illustrating one embodiment of the detection/error extraction system shown in FIG. ~~2~~ 3.

Please amend paragraph 19 starting on page 5 as follows:

FIG. 5 is a schematic diagram illustrating another embodiment of the detection/error extraction system shown in FIG. ~~2~~ 3.

Please amend paragraph 29 starting on page 8 as follows:

The downconverter 284 receives a frequency reference signal, also called a "local oscillator" signal, or "LO", from a UHF voltage-controlled oscillator (VCO, not shown) of the polar-loop circuit 250 via connection 270, which signal instructs the downconverter 284 as to the proper frequency to which to downconvert the signal received from the LNA 280 via connection 282. The downconverted frequency is called the intermediate frequency or IF. The downconverter 284 sends the downconverted signal via connection 286 to a channel filter 288, also called an "IF filter." The channel filter 288 filters the downconverted signal and supplies it via connection 290 to an amplifier 292. The channel filter 288 selects the one desired channel and rejects all others. Using the GSM system as an example, only one of the ~~224~~ contiguous channels is actually to be received. After all channels are passed by the receive filter 276 and downconverted in frequency by the downconverter 284, only the one desired channel will appear precisely at the center frequency of the channel filter 288. An oscillator (not shown), or its equivalent, determines the selected channel by controlling the local oscillator frequency supplied on connection 270 to the downconverter 284. The amplifier 292 amplifies the received signal and supplies the amplified signal via

connection 294 to a demodulator 296. The demodulator 296 recovers the transmitted analog information and supplies a signal representing this information via connection 298 to the ADC 232. The ADC 232 converts these analog signals to a digital signal at baseband and transfers the signal via bus 228 to the DSP 224 for further processing. As an alternative, the downconverted RF frequency at connection 286 may be 0 Hz, in which case the receiver is referred to as a "direct conversion receiver." In such a case, the channel filter 288 is implemented as a low-pass filter, and the demodulator 296 may be omitted.

Please amend paragraph 49 starting on page 15 as follows:

The differential resistor comprised of resistors 464 and 472 of the error extraction/LP filter element 458a converts the current provided to the error extraction/LP filter element 458a over connections 452, 454, 486, and 488 to voltage. In general, error extraction is performed in the current-domain by subtracting the currents of the two switching-core elements 456 and 480. The resulting current passes through the differential resistor comprised of resistors 464 and 472, creating a voltage from the current-resistance (IR) drop. The error extraction/LP filter element 458a also provides low-pass filtering of the signal received from the switching-core elements 456 and 480. DC offset caused by the mismatch of components of the detection/error extraction system 300a, except for the differential resistor comprising resistors 464 and 472 of the error extraction/LP filter element 458a, is upconverted in frequency. The mismatch due to the differential resistor comprising resistors 464 and 472 remains. Thus, DC offset of the detection/error extraction system 300a is generally the result of mismatch between the two resistors 464 and 472. Stated differently, the DC offset of the entire detection/error extraction system 300a is generally determined by the matching of the differential resistor comprising resistors 464 and 472. As will be described in association with FIG. 6, having low DC offset enables the detection of low-amplitude signals, which is specified in some modulation methodologies such as EDGE, among others.